Four Ways to Conceptualize and Study Policy in Implementation Science Research

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Prevention Science & Methodology Group

NIMH R01MH131649, P50MH113662, R21MH111806
Chapter 24: Policy Dissemination and Implementation Research

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Four very basic ways to think about policy in implementation science

Jonathan Purtle, Corrina Moucheraud, Lawrence H. Yang and Donna Shelley

DEBATE
Open Access
Personal Journey: Evolution of Research Questions

Research Evidence → Policy → Improved Population Mental Health
Implementation
Science
My Research Questions
Policy-Focused Work in the Field of Implementation Science Often Feels Like...

Evidence-based policymaking is not like evidence-based medicine, so how far should you go to bridge the divide between evidence and policy?

Paul Cairney1,2* and Kathryn Oliver3,4
Orienting Definitions for Policy-Focused Implementation Science

• **Policy Dissemination Research:**
  – Seeks to understand how research evidence can be most effectively communicated to policymakers and integrated into policymaking processes
  – Enact policies that are aligned with high quality evidence and promote health equity
  – Improve use of research evidence in policymaking

• **Policy Implementation Research:**
  – Seeks to understanding how the roll out of polices can be optimized to maximize health benefits and health equity
  – Improve use of research evidence in policy implementation

4 Ways to Think About Policy in Implementation Science

1. Policy as Strategy to Use
2. Policy as Context to Understand
3. Policy as Something to Implement
4. Policy as Something to Adopt

Policymaking

Policies

Policy Implementation

Policymaker-Focused Dissemination Research

Policy-Focused Implementation Research
4 Ways to Think About Policy in Implementation Science

1. Policy as Strategy to Use
   - Policymaker-Focused Dissemination Research

2. Policy as Context to Understand

3. Policy as Something to Implement
   - Policy-Focused Implementation Research

4. Policy as Something to Adopt
1. Policy as Strategy to Use

• Goal:
  • Use policy as a strategy to **directly** address barriers and activate facilitators to implementation of an intervention (“the thing”)

• Caveats: Using policy as strategy often...
  • Requires political will/commitment from policymakers, may not be feasible
  • May be technically challenging, slow to change
    • But also can happen quickly, within a political moment
Implementation Strategies That Are Especially Policy Relevant to Policy

- Access new funding
- Alter patient/consumer fees
- Change accreditation or membership requirements
- Change liability laws
- Fund and contract for the clinical innovation
- Make billing easier
- Mandate change
Revisiting the policy ecology framework for implementation of evidence-based practices in mental health settings

Whitney K. Wortham, Aaron H. Rodwin, Jonathan Purtle, Michelle R. Munson and Ramesh Raghavan

The behaviour change wheel: A new method for characterising and designing behaviour change interventions

Michie et al.
Comparing organization-focused and state-focused financing strategies on provider-level reach of a youth substance use treatment model: a mixed-method study

Alex R. Dopp, Sarah B. Hunter, Mark D. Godley, Isabelle González, Michelle Bongard, Bing Han, Jonathan Cantor, Grace Hindmarch, Kerry Lindquist, Blanche Wright, Danielle Schlang, Lora L. Passetti, Kelli L. Wright, Beau Kilmer, Gregory A. Aarons and Jonathan Purtle
Policy as Strategy to Use: Example

Implementation of the Federal 988 Suicide and Mental Health Crisis Hotline Policy: Determinants and Effects of State Policy Implementation Financing Strategies (NIMH R01MH131649)

• “The thing” = the services people receive via the Lifeline
• Implementation strategy: State financing for Lifeline services, specifically telecom fees
Policy as Strategy to Use: Example

Implementation of the Federal 988 Suicide and Mental Health Crisis Hotline Policy: Determinants and Effects of State Policy Implementation Financing Strategies
Policy as Strategy to Use: Example

Implementation of the Federal 988 Suicide and Mental Health Crisis Hotline Policy: Determinants and Effects of State Policy Implementation Financing Strategies

• Aim 1: Characterize states’ 988 implementation financing strategies and identify determinants of implementation strategy adoption

• Aim 2: Explore perceptions of the financing determinants of 988 policy implementation success and acceptability and feasibility of legislative financing strategies to improve implementation.

• Aim 3: Determine the effects of 988 user fee legislation on policy implementation fidelity and reach and mental health crisis outcomes, and assess effect heterogeneity across demographic groups.
4 Ways to Think About Policy in Implementation Science

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Policymaker-Focused Dissemination Research
Policy-Focused Implementation Research
2. Policy as Context to Understand

• Goal:
  • Select and tailor clinically/organizationally-focused implementation strategies for different policy contexts (clinical/programmatic intervention is “the thing”)
### Policy as Context to Understand: Example Suicide Safety Planning in the ED

<table>
<thead>
<tr>
<th>Policy Context A</th>
<th>Policy Context B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health system policy allows physicians to receive bonus payments</td>
<td>Health system policy DOES NOT allow physicians to receive bonus payments</td>
</tr>
<tr>
<td><strong>Barrier to Safety Planning Implementation</strong></td>
<td><strong>Barrier to Safety Planning Implementation</strong></td>
</tr>
<tr>
<td>Physicians not motivated to provide Safety Planning</td>
<td>Physicians not motivated to provide Safety Planning</td>
</tr>
<tr>
<td><strong>Implementation Strategy to Address Barrier</strong></td>
<td><strong>Implementation Strategy to Address Barrier</strong></td>
</tr>
<tr>
<td>Small bonus payment to physician for each Safety Plan completed with an eligible patient</td>
<td>Peer-comparison/leader boarded showing rates of providing Safety Planning between physicians</td>
</tr>
</tbody>
</table>
Levels of Context in “Typical” Clinical D&I Study

**Intervention**
- Evidence-based intervention

**Adopters**
- Clinicians
- Org. leaders

**Inner-setting**
- Imp. climate
- Org. culture

**Outer-setting**
- Policy
Levels of Context in Policy-Focused D&I Study

Intervention
- Policy, evidence-supported

Adopters
- Legislators
- Admin. policymakers

Inner-setting
- Legislature politics
- Governor agenda

Outer-setting
- What influences policymaking?
Levels of Context in Policy-Focused D&I Study

**Intervention**
- Policy, evidence-supported

**Adopters**
- Legislators
- Admin. policymakers

**Inner-setting**
- Legislature politics
- Governor agenda

**Outer-setting**
- Public opinion
- Fiscal environments
There are established methods for public opinion surveys and news and social media content analysis... There are opportunities to integrate these methods into policy-focused implementation science research.
4 Ways to Think About Policy in Implementation Science

1. Policy as Strategy to Use
   - Policy as Context to Understand

2. Policy as Context to Understand
   - Policy as Something to Implement

3. Policy as Something to Implement
   - Policy-Focused Implementation Research

4. Policy as Something to Adopt
   - Policymaker-Focused Dissemination Research

Policymaking

Policies

Policy Implementation
3. Policy as Something to Implement

• Goal:
  • Understand how the **process of implementing an evidence-supported policy can be improved**

• Example research aims:
  • Describe the process through which the policy was implemented
  • Assess knowledge about the policy among key groups
  • Assess the extent to which the policy was enforced
  • Identify barriers and facilitators to policy implementation
  • Compare the effects of different approaches to policy implementation (dif-in-dif, or randomized designs)
Policy as Something to Implement: Example

**Protocol: mixed-methods study of how implementation of US state medical cannabis laws affects treatment of chronic non-cancer pain and adverse opioid outcomes**

Emma E. McGinty¹*, Kayla N. Tormohlen¹, Colleen L. Barry¹, Mark C. Bicket², Lainie Rutkow¹ and Elizabeth A. Stuart¹
A policy implementation study of earmarked taxes for mental health services: study protocol

Jonathan Purtle¹*, Nicole A. Stadnick², Megan Wynecoop¹, Eric J. Bruns³, Margaret E. Crane⁴,⁵ and Gregory Aarons²
Policy as Something to Implement: Example

Policy Implementation Research on Earmarked Taxes for Mental Health Services (NIMH R21MH125261)

• **Aim 1**: Identify all jurisdictions in the U.S. that have implemented earmarked taxes for mental health services and catalogue information about tax design.

• **Aim 2**: Characterize mental health agency leaders’ experiences implementing earmarked taxes, understand the determinants of decisions about tax-funded programs using the EPIS framework, and assess the acceptability and feasibility of different types of implementation strategies.

• **Aim 3**: Develop a conceptual policy implementation framework to improve earmarked tax design, inform the selection of implementation strategies to increase the taxes’ reach of EBPs, and disseminate the framework to policy audiences.
Cumulative Percentage of U.S. Population Living in a Jurisdiction with an Earmarked Tax for Mental Health Services

207 Separate Earmarked Tax Policies

Perceptions of the **Attributes of Taxes** Earmarked for Behavioral Health Services in CA and WA, “Strongly Agree” Ratings of 6-7 Dichotomized, N=155

## Identity Determinants of Perceived Policy Implementation Success

<table>
<thead>
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<tbody>
<tr>
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</tr>
<tr>
<td><strong>Inner Context</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual role in tax implementation</td>
<td>0.11</td>
<td>0.09</td>
<td>0.04</td>
</tr>
<tr>
<td>Implementation climate related to the tax being used to support EBPs</td>
<td>0.36</td>
<td>&lt;. 001</td>
<td>0.45</td>
</tr>
<tr>
<td><strong>Outer Context</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cosmopolitanism</td>
<td>0.08</td>
<td>0.29</td>
<td>0.04</td>
</tr>
<tr>
<td>Peer pressure</td>
<td>0.1</td>
<td>0.19</td>
<td>0.07</td>
</tr>
<tr>
<td><strong>Innovation Determinant</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Perceptions of earmarked tax policy</td>
<td>0.44</td>
<td>&lt;. 001</td>
<td>0.36</td>
</tr>
</tbody>
</table>
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Policymaking
Policies
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Policymaker-Focused Dissemination Research
Policy-Focused Implementation Research
4. Policy as Something to Adopt

• Goal:
  • Understand how policymakers’ minds can be changed, and policymaking processes can be modified, to increase adoption, and thus reach, of an evidence-supported policy
  • Policymaker-focused dissemination research
    • Focused on clear and compelling communication of research evidence to policymakers

• Example research aims:
  • Characterize policymakers’
    • Knowledge about the policy and/or the issues that it addresses
    • Support for the policy (define it for them)
    • Attitudes towards the policy
  • Characterize the sociopolitical environment related to the policy and/or the issue it addresses
    • Public opinion
    • News, entertainment, and social media
  • Tailor and test different messages about the policy for policymakers with different characteristics (audience segmentation)
  • Evaluate researcher-policymaker collaboratives’ effects on policy adoption
Three Stage Approach to Policymaker-Focused Dissemination Research

Formative Audience Research: Characterizing Policymakers’
- Knowledge and Attitudes about Issues
- Prevalence and Correlates of Policymaker Support for Policies
Legislator Factors Associated with Support for State Behavioral Health Parity Laws (39.0% strongly support)

Adjusted odds ratio

- Parity laws increase access to behavioral health treatments: 6.25
- Parity laws do not increase insurance costs: 2.84
- Mental health treatments can be effective: 1.69
- Substance use disorder treatments can be effective: 2.41
- Mental illness stigma score: -0.86
- Liberal ideology: 4.84

Formative Audience Research: Identifying Policymakers’ Priorities
Proportion of Youth Substance Use Issues Rated as “High Priority” (4 or 5 on 5-point Scale)
State and County Substance Use Agency Officials, 2020, N=122

- Social determinants of youth substance use: 87%
- Adverse childhood experiences/childhood trauma: 85%
- Access to school-based youth SUD programs: 82%
- Impact of parental SUD on youth: 80%
- Improving the implementation of evidence-based youth SUD programs: 79%
- Access to community-based youth SUD programs: 79%
- Coordinating youth SUD and community-based social services: 76%
- Access to family-focused youth SUD programs: 76%
- Preventing opioid deaths among youth: 73%
- Use of quality measures in youth SUD treatment and prevention programs: 72%
- Access to harm reduction education: 66%
- Access to naloxone for youth in communities and schools: 49%
- Access to medications for OUD among youth: 49%
- De-implementing non-evidence-based youth SUD programs: 41%

Three Stage Approach to Policymaker-Focused Dissemination Research

Audience segmentation to disseminate behavioral health evidence to legislators: an empirical clustering analysis

Jonathan Purtle, Félice Lé-Scherban, Xi Wang, Paul T. Shattuck, Enola K. Proctor and Ross C. Brownson
Three Behavioral Health Audience Segments of State Legislators

- **Budget-Oriented Skeptics with Stigma**: 47%
- **Passive Supporters**: 29%
- **Action-Oriented Supporters**: 24%
Communicating Evidence-Based Information on Cancer Prevention to State-Level Policy Makers

Ross C. Brownson, Elizabeth A. Dodson, Katherine A. Stamatakis, Christopher M. Casey, Michael B. Elliott, Douglas H. Wintrone, Matthew W. Kreuter

Manuscript received June 13, 2010; revised November 8, 2010; accepted November 30, 2010.

Correspondence to: Ross C. Brownson, PhD, Prevention Research Center in St. Louis, Alvin J. Sirman Cancer Center, Washington University in St. Louis, 400 N. Kingshighway, St. Louis, MO 63110-1055, USA.

Rapid-Cycle Experimentation With State and Federal Policymakers for Maximizing the Reach of Racial Research

J. Jessica Pugel, MA, J. Taylor Scott, PhD, Nicalyn Charlton, MSc, Cagla Giray, PhD, Mary A. Fernandes, MA, PhD

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2648 • Online ISSN 1744-2656 • https://doi.org/10.1332/174426421X16535828173307
Accepted for publication 26 May 2022 • First published online 27 June 2022

SciComm Optimizer for Policy Engagement: a randomized controlled trial of the SCOPE model on state legislators’ research use in public discourse

J. Taylor Scott1, K. Megan Collier2, Jessica Pugel1, Patrick O’Neill3, Elizabeth C. Long1, Mary A. Fernandes4, Katherine Cruz2, Brittany Gay1, Cagla Giray5 and D. Max Crowley1


Liana B. Winett, Jeff Niederdepp, Yiwei Xu, Sarah Gollust, Erika Franklin

ISSN (online): 2573-4342

Cutting through the noise during crisis by enhancing the relevance of research to policymakers

Taylor Scott, jxs1622@psu.edu
Jessica Pugel, jrp6229@psu.edu
Pennsylvania State University, USA

Daniel M. Butler1 and David W. Nickerson2
General Procedure:

1. Randomize policymakers (usually cluster)
2. Disseminate evidence
3. Collect data and compare across study arms
Considerations: What to experimentally manipulate?

- **Source/messenger**
  - E.g., academic researcher vs. advocacy organization

- **Message/frame**
  - E.g., emphasize narrative vs. quantitative data

- **Channel/mode**
  - E.g., e-mailed policy brief vs. data dashboard

- **Assess effect heterogeneity between audience sub-groups**

Brownson et al. (2018) Model for Dissemination Research
## Considerations: Outcomes

<table>
<thead>
<tr>
<th>Outcome Type</th>
<th>Outcome</th>
<th>Pros</th>
<th>Cons/Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement with disseminated evidence</td>
<td>E-mail views</td>
<td>• Directly observable, no need for surveys</td>
<td>• Necessarily outcomes, but not meaningful in and of themselves</td>
</tr>
<tr>
<td></td>
<td>Link clicks/website visits</td>
<td></td>
<td>• Some e-mail servers block e-mail view and link click tracking</td>
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<td></td>
<td>Requests for consultation</td>
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<tr>
<td>Use of disseminated evidence</td>
<td>Evidence in social media posts</td>
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<tr>
<td></td>
<td>Evidence in bill content</td>
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<tr>
<td>Knowledge and attitudes related to disseminated evidence</td>
<td>Survey responses</td>
<td>• Important antecedents to meaningful changes in policymaker behavior</td>
<td>• Achieving reasonable response rate (external validity concerns)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Results may be ephemeral, not enduring</td>
</tr>
</tbody>
</table>
Partisan differences in the effects of economic evidence and local data on legislator engagement with dissemination materials about behavioral health: a dissemination trial

Jonathan Purtle, Katherine L. Nelson, Luwam Gebrekristos, Félice Lê-Scherban and Sarah E. Gollust
Effects of Dissemination Materials are Moderated by Political Party Affiliation

Panel A. First Dissemination E-mail, n = 6,509

Panel B. Second Dissemination E-mail, (n = 6,153)
Unintended consequences of disseminating behavioral health evidence to policymakers: Results from a survey-based experiment

Jonathan Purtle¹, Katherine L. Nelson², Félice Lë-Scherban² and Sarah E. Gollust³
Main Effect Results:

- **Policy Brief Relevance**
  - State-Tailored Data (Intervention): 12.4
  - National Data (Control): 11.9
  - $t = 1.12, p = .24$

- **Parental Blame**
  - State-Tailored Data (Intervention): 4.6
  - National Data (Control): 3.9
  - $t = 2.37, p = .02$
Modeling Use of Research Evidence in Different Policy Contexts

Simulating the role of knowledge brokers in policy making in state agencies: An agent-based model

Todd Combs PhD¹ | Katherine L. Nelson PhD, MPH²,³ | Douglas Luke PhD¹ | F. Hunter McGuire MPH⁴ | Gracelyn Cruden PhD⁵ | Rosie Mae Henson MPH⁶ | Danielle R. Adams MSW⁷ | Kimberly Eaton Hoagwood PhD⁸ | Jonathan Purtle DrPH, MSc⁶
Evidence-based policy proposal
- Cost (-1, 1)
- Contextual alignment (-1, 1)
- Strength of evidence (-1, 1)

Agency Decision
- Adopt
- Reject
- No action

Time to Decision

- Cost (0-1)
- Contextual alignment (0-1)
- Strength of evidence (0-1)
“The policy making process is a political process, with the basic aim of reconciling interests in order to negotiate a consensus, not of implementing logic and truth. The value issues in policy making cannot be settled by referring to research findings.”

- Carol Weiss, 1977
3rd Annual 2 Day Virtual Training in Policy-Focused Implementation Science

• Fall 2024, Date TBD

• https://publichealth.nyu.edu/w/gcis/activities/Cultivate/Training
Where is “policy” in dissemination and implementation science? Recommendations to advance theories, models, and frameworks: EPIS as a case example

Erika L. Crable\textsuperscript{1,2,3*}, Rebecca Lengnick-Hall\textsuperscript{4}, Nicole A. Stadnick\textsuperscript{1,2,3}, Joanna C. Moullin\textsuperscript{5} and Gregory A. Aarons\textsuperscript{1,2,3}
Additional Recent Resources

Cruden et al.
*Implementation Science Communications* (2023) 4:113
https://doi.org/10.1186/s43058-023-00492-6

**METHODOLOGY**

Who’s “in the room where it happens”? A taxonomy and five-step methodology for identifying and characterizing policy actors

Gracelyn Cruden\(^1\)\(^*\), Erika L. Crable\(^2\), Rebecca Lengnick-Hall\(^3\) and Jonathan Purtle\(^4\)
Strategies for enacting health policy codesign: a scoping review and direction for research

Sarah Cusworth Walker¹*, Barbara Baquero²†, Betty Bekemeier³, McKenna Parnes¹ and Kashika Arora⁴
Applying hybrid effectiveness-implementation studies in equity-centered policy implementation science

Yuka Asada¹*, Aimee Kroll-Desrosiers²,³,⁴, Jamie F. Chriqui⁵,⁶, Geoffrey M. Curran⁷, Karen M. Emmons⁸, Debra Haire-Joshu⁹ and Ross C. Brownson¹⁰,¹¹
Thank You!

- Jonathan.Prtle@nyu.edu